

CLAIMS

What is claimed is:

1. In a disk-based data storage system, a method for synchronizing
5 newly recorded data with previously recorded data, comprising:
 - measuring a first difference between a wobble reference signal and
previously recorded data;
 - writing test data on a test track to measure a second difference between
the wobble reference signal and the test data, the test data written
10 synchronous with a write clock;
 - determining a delay offset by comparing the first difference and the
second difference; and
 - writing new data using the write clock and the delay offset such that the
new data is synchronized with the previously recorded data.
- 15 2. The method of Claim 1 further including:
 - writing the test data to the test track with the delay offset set to zero;
 - reading the test data from the test track;
 - subtracting the first difference from the second difference to determine
20 the delay offset for the write clock calibration delay.
3. The method of Claim 1 further including:
 - inserting the delay offset into a wobble-to-laser path to cause the new
data to have a same epoch as the previously recorded data.
- 25 4. The method of Claim 1 further including:

the step of checking whether an error value is within predetermined limits, wherein the error value is the difference between the first difference from step a) and the second difference from step b).

5 5. The method of Claim 4 further including:
adjusting the write clock in accordance with the error value, if the error
value is outside the predetermined limits.

10 6. A disc based data storage system for editing old data on a disc media
with new data, comprising:

means for measuring a first difference between a wobble reference
signal and previously recorded data;
means for writing test data on a test track to measure a second
difference between the wobble reference signal and the test data, the test data
15 written synchronous with a write clock;
means for determining a delay offset by comparing the first difference
and the second difference; and
means for writing new data using the write clock and the delay offset
such that the new data is synchronized with the previously recorded data.

20 7. The system of Claim 6 wherein the means for writing test data on a
test track to measure a second difference between the wobble reference signal
and the test data, further comprises:
means for writing the test data to the test track with the delay offset

25 set to zero;
means for reading the test data from the test track;

means for subtracting the first difference from the second difference to determine the delay offset for the write clock calibration delay.

8. The system of Claim 6 wherein the means for writing new data using
5 the write clock and the delay offset such that the new data is synchronized with the old data further includes means for inserting the delay offset into a wobble-to-laser path to cause the new data to have a same epoch as the previously recorded data.

10 9. The system of Claim 6 further comprising means for checking whether an error value is within predetermined limits, wherein the error value is the difference between the first difference and the second difference.

15 10. The system of Claim 9 further comprising means for adjusting the write clock in accordance with the error value, if the error value is outside the predetermined limits.

11. A disc recorder for implementing a rewrite function for disc media having previously recorded data thereon, comprising:

20 a disc media having recorded thereon at least one track of previously recorded data; and
a disc reader/recorder device for implementing a method for performing synchronous rewrites onto the disc media, the method comprising:

25 a) measuring a first difference between a wobble reference signal of the disc media and the previously recorded data;

- b) writing test data on a test track to measure a second difference between the wobble reference signal and the test data, the test data written synchronous with a write clock;
- 5 c) determining a delay offset by comparing the first difference and the second difference; and
- d) writing new data using the write clock and the delay offset such that the new data is synchronized with the previously recorded data.
- 10 12. The device of Claim 11 wherein step b) further includes the steps of: writing the test data to the test track with the delay offset set to zero; reading the test data from the test track; subtracting the first difference from the second difference to determine the delay offset for the write clock calibration delay.
- 15 13. The device of Claim 11 wherein step d) further includes the step of inserting the delay offset into a wobble-to-laser path to cause the new data to have a same epoch as the previously recorded data.
- 20 14. The device of Claim 11 further including the step of checking whether an error value is within predetermined limits, wherein the error value is the difference between the first difference from step a) and the second difference from step b).
- 25 15. The device of Claim 14 further including the step of adjusting the write clock in accordance with the error value, if the error value is outside the predetermined limits.